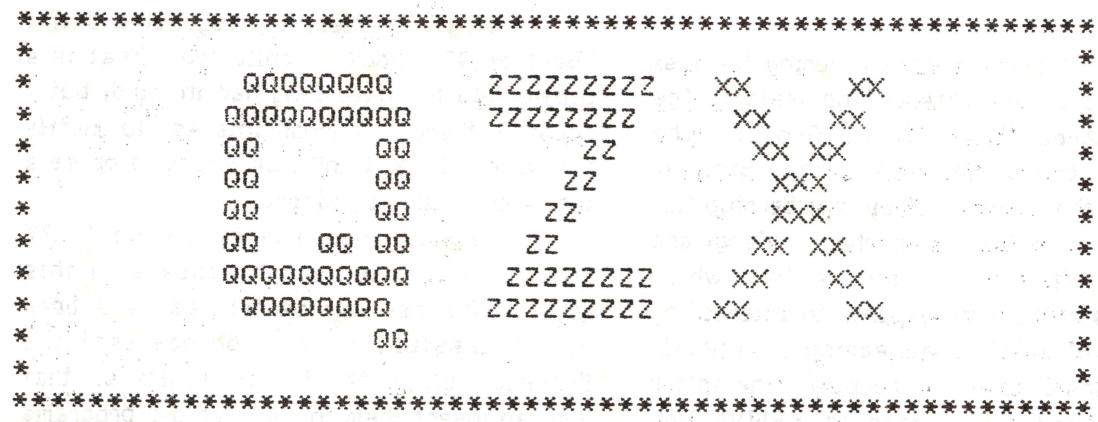

The Journal Covering Amateur Radio & Sinclair Computers
ZX80; Micro-Ace; ZX81; TS1000, 1500, & 2068; QL; Z88
Alex. F. Burr, K5XY, Publisher
2025 O'Donnell Drive
Las Cruces, New Mexico
88001

(3)

Volume 8 Number 1 ($1.50 / issue) 1990 February

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EDITOR'S NOTES

K5XY

The big event for me during the last month was a very interesting visit to the Chicago Area Times Users Group. The CATUG is one of the most active Sinclair groups in the country. Their membership list includes names like Lessenberry, Feng, and Pashtoon, (to mention only a few) which appear as authors or experts in interesting and helpful articles appearing in Sinclair publications all over the country. The editor of their fine newsletter is K9WVY,Bob Swoger. He also runs their BBS which is based on a DEC PDP-11 computer with three hard drives and three incoming phone lines.

The club meets on the second Saturday of the month in Downer's Grove, IL (a suburb of Chicago). The meeting started at 1:00P and it was almost 6PM when I left. The meeting included a business segment wherein the treasurer valiently defended the club's bank account as the purchase of a color monitor was discussed. Demonstrations of disk operating systems, and the club's BBS took place, and a lot of equipment changed hands. (I got a modem for my TS2068.) I was particularly interested in disk systems. The Larken interface and DOS was strongly recommended by K9WVY.

WA2BSS, Stu, has asked me to announce that the Trenton Computer Fair '90 will be held on Saturday and Sunday April 21. More information can be had by sending him a packet request with name and address to WA2BSS @ WA2RKN-2 or a SASE to his call book address (see also his unclassified ad).

You should particularly note the advertisement from T & C Services in this issue. Not that it is any different than the ones which have been appearing for a long time in QZX, but just because it is appearing again. That is the longest runnning advertisement QZX has ever had, over 20 months. That company has made a major contribution to keeping QZX running.

W4AT, Charles, has suggested that a "Best of QZX" book be collected. That is a project which I have long had in mind, but I doubt if there is enough interest to justify the work. If you think I am wrong, drop me a card and I will reconsider.

WA6DLI, Bob, has sent some VERY timely information which appears in this issue. The new microsatellites have been very sucessful so far. Bob has sent the Keplerian elements of their orbits so that you can insert them in the tracking programs he has written about earlier. The DO-17 (DOVE) two meter packet satellite ought to be of particular interest because good packet signals can be received from it with almost any antenna.

The next installment of the the series of articles on the TS1000 logic chip was dropped from this issue to make roon for the satellite information. The series will continue in the next issue.

If you have not renewed, please do so NOW (before it slips your mind again).

UNCLASSIFIED ADS

WANTED: UNCLASSIFIED ADS for publication in QZX. Cost is 1 cent for each keystroke (characters, blanks, etc.). Payment must be included with order. This is an excellent way to sell your program or unwanted equipment, ask for help, or find a specific program. Send your ad with payment to QZX, 2025 O'Donnell, Las Cruces, NM 88001.

WANTED: Tasman Interface Parallel Printer Driver and software. Schematic drawing if available. Edward L. Radtke, 1602 Woodluck Ave., Louisville, KY 40205.

QZX Discount: 15% discount on all orders mentioning QZX. T & C Services (address in ad in this issue).

WANTED: Someone w/circuit board experience to put together an RS232 interface card (kit) for me. Stu Ballinger, 11 Lown Ct., Poughkeepsie, NY 12603-3321 or if local (914)452-2482 evenings bet. 8P-10 + weekends.

QZX FRIENDS

W6OOA -- Al said that the new QZX was readable and asked for permission to have his club newsletter reprint some of QZX.

WD5ERG -- Ron says he is enjoying packet with his ZX81, Comlink II, and MFJ1270B TNC.

KA0HEX -- John rejoined after almost three years and requested all the back issues. Welcome back. He is updating his ZX81 and still putting it to good use by writing a program to help him with his electronic service business.

WA4BQE -- Ed renewed and contributed to the postage fund.

W4AT -- Charles sent special thanks to LU8MAD and Don Lamen for their suburb material.

WA6DLI -- Bob said that he liked the format changes.

(716) 834-1716 **T & C SERVICES** (716) 834-1716
20 LIBERTY TERRACE
BUFFALO, N.Y. 14215
Call or write for a free catalog of products for the Timex Computer

SATELLITE INFO

WA6DLI

Here are some Keplerians for the new Microsats as well as update on MIR for all those using the Sinclair programs I have listed or furnished previously.. The DO-17 DOVE packets are received on no special antennas..just my discone, rubber duck, or J work fine.

Bob WA6DLI Feb 5, 1990

AMSAT note:
Users please note: The assignment of NORAD provided element sets and corresponding object numbers to specific Microsats and UoSats has been made by Phil Karn, KA9Q, working closely with Ra Soifer, W2RS, Bob McGwier, N4HY, and others. AMSAT has confidence in the correspondences given but they are not yet finally confirmed. The Microsat 1-4 identifiers given in the government information from which this release is derived were assigned arbitrarily and do not correspond to OSCARs 16-19.

```
Satellite: AO-10
Catalog number: 14129
Epoch time:      90017.27634125
Element set:     451
Inclination:       25.9396 deg
RA of node:       223.5666 deg
Eccentricity:    0.6004515
Arg of perigee:    110.6067 deg
Mean anomaly:      320.9838 deg
Mean motion:    2.05879643 rev/day
Decay rate:        5.7e-07 rev/day^2
Epoch rev:            2162

Satellite: UO-11
Catalog number: 14781
Epoch time:      90024.60023258
Element set:     598
Inclination:       97.9706 deg
RA of node:        81.7576 deg
Eccentricity:    0.0012981
Arg of perigee:    348.1213 deg
Mean anomaly:      11.9712 deg
Mean motion:   14.64790863 rev/day
Decay rate:      2.674e-05 rev/day^2
Epoch rev:           31494

Satellite: AO-13
Catalog number: 19216
Epoch time:      90020.44983662
Element set:      69
Inclination:       57.1255 deg
RA of node:       172.4315 deg
Eccentricity:    0.6876711
Arg of perigee:    219.4762 deg
Mean anomaly:      61.6910 deg
Mean motion:    2.09702838 rev/day
Decay rate:      -1.37e-06 rev/day^2
Epoch rev:            1230
```

Satellite: DO-17
Catalog number: 20440
Epoch time: 90024.38209160
Element set: 3
Inclination: 98.7160 deg
RA of node: 100.8517 deg
Eccentricity: 0.0011276
Arg of perigee: 211.1319 deg
Mean anomaly: 148.8824 deg
Mean motion: 14.28569390 rev/day
Decay rate: 2.3136e-04 rev/day^2
Epoch rev: 33

Satellite: WO-18
Catalog number: 20441
Epoch time: 90024.31185946
Element set: 2
Inclination: 98.7168 deg
RA of node: 100.7824 deg
Eccentricity: 0.0011162
Arg of perigee: 214.1778 deg
Mean anomaly: 145.7732 deg
Mean motion: 14.28705650 rev/day
Decay rate: 1.3144e-04 rev/day^2
Epoch rev: 32

Satellite: LO-19
Catalog number: 20442
Epoch time: 90024.38180079
Element set: 4
Inclination: 98.7167 deg
RA of node: 100.8503 deg
Eccentricity: 0.0012258
Arg of perigee: 210.6580 deg
Mean anomaly: 149.3875 deg
Mean motion: 14.28756933 rev/day
Decay rate: -1.7243e-04 rev/day^2
Epoch rev: 33

Satellite: MIR
Catalog number: 16609
Epoch time: 90024.81737861
Element set: 358
Inclination: 51.6214 deg
RA of node: 331.7508 deg
Eccentricity: 0.0020339
Arg of perigee: 86.0444 deg
Mean anomaly: 274.2772 deg
Mean motion: 15.56385754 rev/day
Decay rate: 4.4885e-04 rev/day^2
Epoch rev: 22572

```
Satellite: RS-10/11
Catalog number: 18129
Epoch time:       90024.21669961
Element set:     1017
Inclination:        82.9243 deg
RA of node:         74.9022 deg
Eccentricity:     0.0012545
Arg of perigee:    152.3862 deg
Mean anomaly:      207.7963 deg
Mean motion:    13.72053842 rev/day
Decay rate:        -6.0e-08 rev/day^2
Epoch rev:            12970

Satellite: UO-14
Catalog number: 20439
Epoch time:       90024.31223425
Element set:          8
Inclination:        98.7121 deg
RA of node:        100.7773 deg
Eccentricity:     0.0011029
Arg of perigee:    209.0952 deg
Mean anomaly:      150.9520 deg
Mean motion:    14.28443513 rev/day
Decay rate:      1.5545e-04 rev/day^2
Epoch rev:               32

Satellite: UO-15
Catalog number: 20443
Epoch time:       90023.82219061
Element set:          7
Inclination:        98.7165 deg
RA of node:        100.2885 deg
Eccentricity:     0.0010048
Arg of perigee:    210.8523 deg
Mean anomaly:      149.2068 deg
Mean motion:    14.28223237 rev/day
Decay rate:     -3.0107e-04 rev/day^2
Epoch rev:               25

Satellite: AO-16
Catalog number: 20438
Epoch time:       90024.38214443
Element set:          3
Inclination:        98.7174 deg
RA of node:        100.8496 deg
Eccentricity:     0.0011059
Arg of perigee:    210.2871 deg
Mean anomaly:      149.7737 deg
Mean motion:    14.28586878 rev/day
Decay rate:      3.8261e-04 rev/day^2
Epoch rev:               33
```

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Satellite: SPOT-2
Catalog number: 20436
Epoch time:      90024.87607554
Element set:       8
Inclination:      98.7236 deg
RA of node:      101.3451 deg
Eccentricity:    0.0003445
Arg of perigee:   177.1740 deg
Mean anomaly:     182.9359 deg
Mean motion:   14.26690700 rev/day
Decay rate:     -6.32e-06 rev/day^2
Epoch rev:            40

Satellite: V-35 Rocket Body
Catalog number: 20437
Epoch time:      90025.07930591
Element set:       5
Inclination:      98.6167 deg
RA of node:      101.5503 deg
Eccentricity:    0.0011910
Arg of perigee:   184.1978 deg
Mean anomaly:     175.9110 deg
Mean motion:   14.30125629 rev/day
Decay rate:      1.088e-05 rev/day^2
Epoch rev:            43

Subject: Microsats/Uosats OK!!!   (from Russian RS/team)

**************************************************************
     Fantastic signals are coming down from Microsat
     on 145825. DOVE FSK was heard in Moscow on 12:00
     and 13:35  s-599+!!!
     New great step, new Amateur Era is starting!!!
                 Congrats
**************************************************************
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Spacecraft	OSCAR number	Frequency, MHz	Mode
UoSat D	UO-14	435.070	1200 bps AFSK (FM)
UoSAT E	UO-15	435.120	1200 bps AFSK (FM)
PACSAT	AO-16	437.025	1200 bps PSK AX.25
DOVE	DO-17	145.825	1200 bps AFSK AX.25 (FM)
WEBERSAT	WO-18	437.075	1200 bps PSK AX.25
LUSAT	LO-19	437.150	1200 bps PSK AX.25

73, K5XY

QZX presents the best software & hardware projects available for the radio amateur. While the contents are believed to be accurate, no warranty is extended on any program or project. No investigation has been made of the claims or reputation of any advertiser. It would be greatly appreciated if all correspondence requiring an answer would be accompanied by a self-addressed stamped envelope (SASE). Copyright by QZX, 1990. All rights reserved, photocopying by permission only.

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* delivery.)  Thanks (90/02)              *
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* Address __________________________      *
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